

Title (en)  
HUMAN MILK OLIGOSACCHARIDES TO AMELIORATE SYMPTOMS OF STRESS

Title (de)  
MENSCHLICHE MILCHOLISACCHARIDE FÜR DIE VERMINDERUNG DER STRESSSYMPTOMEN

Title (fr)  
OLIGOSACCHARIDES HUMAINS POUR LA REDUCTION DES SYMPTOMES DU STRESS

Publication  
**EP 2934189 B1 20191106 (EN)**

Application  
**EP 13818905 A 20131218**

Priority  
• US 201261738491 P 20121218  
• US 2013076026 W 20131218

Abstract (en)  
[origin: WO2014100126A1] A nutritional composition comprising at least one human milk oligosaccharide selected from 6' sialyllactose, lacto-N-neotetraose, lacto-N-tetraose, disialylated lacto-N-tetraose, 3'-fucosyllactose, and 3'-sialyllactose. The nutritional composition is used in a method of reducing stress in an individual in need thereof.

IPC 8 full level  
**A23L 33/10** (2016.01); **A23C 9/20** (2006.01); **A23L 33/00** (2016.01); **A23L 33/21** (2016.01); **A61K 31/7016** (2006.01)

CPC (source: EP US)  
**A23C 9/203** (2013.01 - EP US); **A23C 9/206** (2013.01 - US); **A23L 33/40** (2016.07 - EP US); **A61K 31/7016** (2013.01 - EP US); **A61K 31/702** (2013.01 - EP US); **A61K 45/06** (2013.01 - EP US); **A61P 25/00** (2017.12 - EP); **A23V 2002/00** (2013.01 - US)

Citation (opposition)  
Opponent : Société des Produits Nestlé S.A.  
• US 2012171165 A1 20120705 - BUCK RACHAEL [US], et al  
• US 2012172319 A1 20120705 - CHOW JOMAY [US], et al  
• US 2012172330 A1 20120705 - BUCK RACHAEL [US], et al  
• US 2012172307 A1 20120705 - DAVIS STEVEN R [US], et al  
• EP 2708145 A1 20140319 - ABBOTT LAB [US]  
• RHEE SANG H, ET AL: "Principles and clinical implications of the brain-gut-enteric microbiota axis", NATURE, vol. 6, 1 May 2009 (2009-05-01), pages 306 - 314, XP055785233  
• E. BARRETT, R.P. ROSS, P.W. O'TOOLE, G.F. FITZGERALD, C. STANTON: "γ-Aminobutyric acid production by culturable bacteria from the human intestine", JOURNAL OF APPLIED MICROBIOLOGY, vol. 113, no. 2, 15 August 2012 (2012-08-15), pages 411 - 417, XP055066783, ISSN: 13645072, DOI: 10.1111/j.1365-2672.2012.05344.x  
• LYTE MARK: "Probiotics function mechanistically as delivery vehicles for neuroactive compounds: Microbial endocrinology in the design and use of probiotics", BIOESSAYS, vol. 33, no. 8, 1 August 2011 (2011-08-01), pages 574 - 581, XP002697273, DOI: 10.1002/bies.201100024  
• HUGHES CHRISTINE, ET AL: "Galactooligosaccharide supplementation reduces stress-induced gastrointestinal dysfunction and days of cold or flu: a randomized, double-blind, controlled trial in healthy university students", AM J CLIN NUTR, vol. 93, 1 January 2011 (2011-01-01), pages 1305 - 1311, XP055785241  
• JOMAY CHOW, MATTHEW R. PANASEVICH, DANNY ALEXANDER, BRITTANY M. VESTER BOLER, MARIANA C. ROSSONI SERAO, TREVOR A. FABER, LAURA L. : "Fecal Metabolomics of Healthy Breast-Fed versus Formula-Fed Infants before and during In Vitro Batch Culture Fermentation", JOURNAL OF PROTEOME RESEARCH, vol. 13, no. 5, 2 May 2014 (2014-05-02), pages 2534 - 2542, XP055275560, ISSN: 1535-3893, DOI: 10.1021/pr500011w  
• PEDRO ANTONIO PRIETO: "In Vitro and Clinical Experiences with a Human Milk Oligosaccharide, Lacto-N-neotetraose, and Fructooligosaccharides", FOODS & FOOD INGREDIENTS JOURNAL OF JAPAN : FFIジャーナル, 1 January 2005 (2005-01-01), pages 1018 - 1030, XP055172938, Retrieved from the Internet <URL:http://www.fficr.or.jp/zaidan/fficrhome.nsf/7bd44c20b0dc562649256502001b65e9/1892cd171962b9d6492570ed00210f3e/\$FILE/210(11)5.pdf>  
• M. LI, L. L. BAUER, X. CHEN, M. WANG, T. B. KUHLENSCHMIDT, M. S. KUHLENSCHMIDT, G. C. FAHEY, S. M. DONOVAN: "Microbial Composition and In Vitro Fermentation Patterns of Human Milk Oligosaccharides and Prebiotics Differ between Formula-Fed and Sow-Reared Piglets", THE JOURNAL OF NUTRITION, vol. 142, no. 4, 1 April 2012 (2012-04-01), US, pages 681 - 689, XP055275628, ISSN: 0022-3166, DOI: 10.3945/jn.111.154427

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2014100126 A1 20140626**; BR 112015014420 A2 20170711; CA 2893217 A1 20140626; CA 2893217 C 20171128; CN 104822279 A 20150805; CN 104822279 B 20200911; DK 2934189 T3 20191125; EP 2934189 A1 20151028; EP 2934189 B1 20191106; ES 2763958 T3 20200601; HK 1217082 A1 20161223; IL 239107 A0 20150730; MX 2015007933 A 20151009; MY 187609 A 20211004; PH 12015501309 A1 20150824; SG 11201504579Q A 20150730; TW 201438719 A 20141016; US 10779550 B2 20200922; US 2015320778 A1 20151112

DOCDB simple family (application)  
**US 2013076026 W 20131218**; BR 112015014420 A 20131218; CA 2893217 A 20131218; CN 201380064768 A 20131218; DK 13818905 T 20131218; EP 13818905 A 20131218; ES 13818905 T 20131218; HK 16104752 A 20160426; IL 23910715 A 20150601; MX 2015007933 A 20131218; MY PI2015001532 A 20131218; PH 12015501309 A 20150609; SG 11201504579Q A 20131218; TW 102147008 A 20131218; US 201314653480 A 20131218